**Table S1**: Passport information on 33 Kokum (*Garcinia indica*) genotypes collected from Konkan region of India

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Sl. No.** | **Accession No.** | **Tree No.** | **Year of collection** | **Collection Site Details** | | |
| **Village** | **District** | **State** |
| 1 | IC136678 | IC136678 | 1987 | Hebree, Udupi | South Canara | Karnataka |
| 2 | IC136682 | IC136682-2 | 1989 | - | Sirsi | Karnataka |
| IC136682-3 | 1989 |
| 3 | IC136685 | IC136685-1 | 1989 | Hebbegada,  Siddhapura | Mangalore | Karnataka |
| IC136685-2 | 1989 |
| 4 | IC136687 | IC136687-1 | 1989 | Sonagu,  Siddhapura | Mangalore | Karnataka |
| IC136687-2 | 1989 |
| IC136687-3 | 1989 |
| 5 | IC409060 | IC409060-2 | 1999 | Badiyadkka | Kasaragod | Kerala |
| 6 | IC409061 | IC409061-3 | 1999 | Karkala | Udupi | Karnataka |
| 7 | IC550571 | IC550571 | 1989 | - | - | Karnataka |
| 8 | IC550572 | IC550572-1 | 1989 | - | - | Karnataka |
| 9 | IC342296 | IC342296-1 | 2002 | Mainagundi | Shimoga | Karnataka |
| IC342296-3 | 2002 |
| 10 | IC342297 | IC342297-1 | 2002 | Hireguthi | Uttar Kannad | Karnataka |
| 11 | IC342298 | IC342298-1 | 2002 | Adluru | Uttar Kannad | Karnataka |
| IC342298-3 | 2002 | Adluru | Uttar Kannad | Karnataka |
| 12 | IC342301 | IC342301-1 | 2002 | Kuluru Panchayat | Uttar Kannad | Karnataka |
| IC342301-2 | 2002 |  |  |  |
| 13 | IC342302 | IC342302-2 | 2002 | Kuluru Panchayat | Uttar Kannad | Karnataka |
| 14 | IC342303 | IC342303-2 | 2002 | Kuluru Panchayat | Uttar Kannad | Karnataka |
| 15 | IC342305 | IC342305-2 | 2002 | Kuluru Panchayat | Uttar Kannad | karnataka |
| 16 | IC342315 | IC342315-2 | 2002 | Hegumbi Mane | Uttar Kannad | Karnataka |
| 17 | IC342319 | IC342319-2 | 2002 | Kakkalli | Uttar Kannad | Karnataka |
| IC342319-3 | 2002 |  | Uttar Kannad | Karnataka |
| 18 | IC342321 | IC342321-1 | 2002 | Sagar | Shimoga | Karnataka |
| IC342321-2 | 2002 |  | Shimoga | Karnataka |
| 19 | IC342322 | IC342322-1 | 2002 | Ramdurga Extn., Sagar | Shimoga | Karnataka |
| IC342322-3 | 2002 |  | Shimoga | Karnataka |
| 20 | IC342327 | IC342327-1 | 2002 | Balur farm, Ripponpet | Shimoga | Karnataka |
| 21 | IC342329 | IC342329-3 | 2002 | Thedimberi gutte | Udupi | Karnataka |
| 22 | IC383701 | IC383701-3 | 2003 | Peroduka, Beerundi | Udupi | Karnataka |
| 23 | IC405350 | IC405350-2 | 2004 | Karnataka border | South Goa | Goa |

**Table S2**: Pearson’s correlation among 25 quantitative traits of 33 Kokum genotypes collected from Konkan region of India

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | FFW (g) | FFLT (mm) | FRWDT(mm) | FRW(g) | FRTHK(mm) | STLT (mm) | WDTP (mm) | S No | SLT (mm) | SWDT (mm) | STHK (mm) | FSWT (g) | DSWT (g) |
| FFW (g) | 1.00 |  |  |  |  |  |  |  |  |  |  |  |  |
| FFW (g) | 0.49 | 1.00 |  |  |  |  |  |  |  |  |  |  |  |
| FFLT (mm) | **0.81** | 0.45 | 1.00 |  |  |  |  |  |  |  |  |  |  |
| FRWDT(mm) | 0.66 | 0.47 | 0.59 | 1.00 |  |  |  |  |  |  |  |  |  |
| FRW(g) | 0.18 | 0.51 | 0.24 | 0.54 | 1.00 |  |  |  |  |  |  |  |  |
| FRTHK(mm) | -0.19 | -0.04 | -0.20 | -0.03 | -0.11 | 1.00 |  |  |  |  |  |  |  |
| STLT (mm) | 0.44 | 0.08 | 0.32 | 0.28 | -0.18 | 0.02 | 1.00 |  |  |  |  |  |  |
| WDTP (mm) | 0.25 | -0.36 | 0.32 | -0.15 | -0.38 | -0.10 | 0.20 | 1.00 |  |  |  |  |  |
| S No | 0.39 | 0.46 | 0.21 | 0.13 | -0.16 | -0.31 | -0.06 | -0.12 | 1.00 |  |  |  |  |
| SLT (mm) | 0.46 | 0.41 | 0.50 | 0.29 | 0.03 | -0.31 | 0.19 | -0.10 | 0.51 | 1.00 |  |  |  |
| SWDT (mm) | -0.11 | 0.16 | -0.06 | 0.00 | -0.06 | 0.25 | -0.07 | -0.40 | 0.07 | 0.34 | 1.00 |  |  |
| STHK (mm) | 0.47 | -0.20 | 0.45 | 0.08 | -0.33 | -0.20 | 0.33 | **0.70** | 0.13 | 0.26 | -0.19 | 1.00 |  |
| FSWT (g) | 0.46 | -0.09 | 0.49 | -0.02 | -0.43 | -0.46 | 0.27 | 0.65 | 0.31 | 0.43 | -0.03 | **0.79** | 1.00 |
| DSWT (g) | 0.58 | -0.07 | 0.54 | 0.08 | -0.30 | -0.13 | 0.30 | **0.73** | 0.21 | 0.30 | -0.12 | **0.92** | **0.79** |
| FKWT (g) | 0.42 | -0.04 | 0.35 | 0.03 | -0.33 | -0.18 | 0.06 | 0.49 | 0.34 | 0.31 | 0.23 | 0.55 | 0.74 |
| DKWT (g) | 0.48 | 0.40 | 0.30 | 0.23 | 0.09 | -0.08 | 0.05 | -0.25 | 0.44 | 0.37 | 0.31 | -0.14 | 0.07 |
| DRWT (g) | **0.73** | 0.37 | 0.59 | 0.20 | -0.13 | -0.25 | 0.29 | 0.10 | 0.45 | 0.47 | -0.03 | 0.17 | 0.40 |
| PW (g) | -0.50 | -0.02 | -0.42 | -0.22 | -0.15 | 0.25 | -0.32 | -0.31 | -0.01 | -0.24 | 0.37 | -0.35 | -0.27 |
| FlrL (mm) | **-0.56** | -0.07 | -0.49 | -0.22 | -0.18 | 0.35 | -0.34 | -0.40 | -0.13 | -0.21 | 0.52 | -0.45 | -0.36 |
| FlrSL (mm) | -0.11 | -0.28 | 0.13 | 0.07 | -0.16 | -0.02 | -0.09 | 0.32 | -0.05 | -0.17 | -0.09 | 0.28 | 0.16 |
| Flr Dia (mm) | -0.19 | -0.21 | -0.15 | -0.11 | -0.42 | 0.15 | -0.18 | 0.08 | 0.02 | -0.06 | 0.19 | 0.22 | 0.11 |
| StkThik (mm) | 0.06 | -0.04 | 0.01 | 0.13 | 0.03 | -0.12 | 0.20 | 0.19 | -0.15 | -0.04 | 0.11 | 0.01 | 0.04 |
| Lf Lth (cm) | 0.01 | -0.02 | 0.12 | 0.04 | -0.05 | 0.00 | 0.19 | 0.24 | -0.19 | 0.10 | 0.02 | 0.03 | 0.07 |
| Lf With (cm) | 0.47 | 0.42 | 0.44 | 0.31 | 0.05 | -0.28 | 0.14 | 0.09 | 0.41 | 0.28 | 0.03 | 0.00 | 0.24 |
| Pet Lth (cm) | -0.10 | 0.04 | 0.08 | 0.21 | 0.40 | 0.02 | -0.35 | -0.09 | -0.29 | -0.15 | 0.08 | -0.28 | -0.26 |
| GBH (cm) |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | FKWT (g) | DKWT (g) | DRWT (g) | PW (g) | FlrL | FlrSL | Flr Dia | StkThik | Lf Lth (cm) | Lf With (cm) | Pet Lth (cm) | GBH (cm) |
| FKWT (g) | 1.00 |  |  |  |  |  |  |  |  |  |  |  |
| DKWT (g) | 0.62 | 1.00 |  |  |  |  |  |  |  |  |  |  |
| DRWT (g) | -0.04 | 0.34 | 1.00 |  |  |  |  |  |  |  |  |  |
| PW (g) | 0.29 | 0.37 | 0.67 | 1.00 |  |  |  |  |  |  |  |  |
| FlrL (mm) | -0.38 | -0.15 | -0.14 | -0.37 | 1.00 |  |  |  |  |  |  |  |
| FlrSL (mm) | -0.49 | -0.14 | -0.05 | -0.39 | **0.90** | 1.00 |  |  |  |  |  |  |
| Flr Dia (mm) | 0.20 | 0.06 | -0.32 | -0.20 | 0.30 | 0.11 | 1.00 |  |  |  |  |  |
| StkThik (mm) | 0.13 | 0.15 | -0.16 | -0.17 | 0.56 | 0.60 | 0.38 | 1.00 |  |  |  |  |
| Lf Lth (cm) | 0.00 | 0.17 | 0.20 | -0.02 | 0.02 | 0.11 | -0.02 | 0.00 | 1.00 |  |  |  |
| Lf With (cm) | -0.02 | 0.08 | 0.08 | 0.00 | -0.13 | -0.03 | 0.02 | -0.23 | 0.52 | 1.00 |  |  |
| Pet Lth (cm) | 0.12 | 0.30 | 0.42 | 0.50 | -0.06 | -0.09 | -0.08 | -0.05 | 0.30 | 0.22 | 1.00 |  |
| GBH (cm) | -0.20 | -0.05 | -0.06 | -0.16 | -0.08 | -0.01 | 0.26 | -0.03 | 0.04 | 0.03 | -0.08 | 1.00 |

**FFW**- fresh fruit weight (g); **FFLT**-fresh fruit length (mm); **FRWDT**-fresh fruit width (mm); **FRW**- fresh rind weight (g); **FRTHK**- fresh rind thichkness (mm); **STLT**-stalk length (mm); **WDTP**-width of projection (mm); **SNo**- number of seeds per fruit; **SLT**-seed length (mm); **SWDT**-seed width (mm); **STHK**-seed thickness (mm); **FSWT**- fresh seed weight (g); **DSWT**- dry seed weight (g); **FKWT**- fresh kernel weight (g); **DKWT**- dry kernel weight (g); **DRWT**- dry rind weight (g); **PW**-pulp weight (g); **FlrL**-flower length (mm); **FlrSL**-Flower stalk (mm); **Flr Dia**-flower diameter (mm); **StkThik**-stalk thickness (mm); **Lf Lth**-leaf length (cm); **Lf Wdh**-leaf width (cm); **Pet Lth**-petiole length (cm); **GBH**-girth at breast height (cm)

**Table S3**: Variability in 10 qualitative traits of 33 Kokum genotypes (23 accessions) collected from Konkan region of India

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| IC No. | FrSh | FrProSh | FrAtr | Fr BSh | FrASh | FrSz | PrYEx | SSz | FKrSh | FKrCl |
| IC136678 | 1 | 5 | 3.0 | 4 | 5 | 3 | 4 | 2 | 2 | 1 |
| IC136682-2 | 1 | 5 | 3.0 | 4 | 5 | 3 | 4 | 2 | 2 | 1 |
| IC136682-3 | 1 | 5 | 3.0 | 4 | 5 | 3 | 4 | 2 | 2 | 1 |
| IC136685-1 | 1 | 5 | 3.0 | 4 | 5 | 3 | 4 | 2 | 2 | 1 |
| IC136685-2 | 1 | 5 | 3.0 | 4 | 5 | 3 | 4 | 2 | 2 | 1 |
| IC136687-1 | 1 | 5 | 3.0 | 4 | 5 | 3 | 4 | 2 | 2 | 1 |
| IC136687-2 | 1 | 5 | 3.0 | 4 | 5 | 3 | 4 | 2 | 2 | 1 |
| IC136687-3 | 1 | 5 | 3.0 | 4 | 5 | 3 | 4 | 2 | 2 | 1 |
| IC342296-1 | 1 | 5 | 3.4 | 4 | 5 | 3 | 4 | 2 | 2 | 1 |
| IC342296-3 | 1 | 5 | 3.0 | 4 | 5 | 3 | 4 | 2 | 2 | 1 |
| IC342297-1 | 1 | 5 | 3.0 | 4 | 5 | 3 | 4 | 2 | 2 | 1 |
| IC342298-1 | 1 | 5 | 3.0 | 4 | 5 | 3 | 4 | 2 | 2 | 1 |
| IC342298-3 | 1 | 5 | 3.3 | 4 | 5 | 3 | 4 | 2 | 2 | 1 |
| IC342301-1 | 1 | 5 | 3.2 | 4 | 5 | 3 | 4 | 2 | 2 | 1 |
| IC342301-2 | 1 | 5 | 3.0 | 4 | 5 | 3 | 4 | 2 | 2 | 1 |
| IC342302-2 | 1 | 5 | 3.0 | 4 | 5 | 3 | 4 | 2 | 2 | 1 |
| IC342303-2 | 1 | 5 | 3.4 | 4 | 5 | 3 | 4 | 2 | 2 | 1 |
| IC342305-2 | 1 | 5 | 2.9 | 4 | 5 | 3 | 4 | 2 | 2 | 1 |
| IC342315-3 | 1 | 5 | 3.0 | 4 | 5 | 3 | 4 | 2 | 2 | 1 |
| IC342319-2 | 1 | 5 | 3.0 | 4 | 5 | 3 | 4 | 2 | 2 | 1 |
| IC342319-3 | 1 | 5 | 3.0 | 4 | 5 | 3 | 4 | 2 | 2 | 1 |
| IC342321-1 | 1 | 5 | 3.0 | 4 | 5 | 3 | 4 | 2 | 2 | 1 |
| IC342321-2 | 1 | 5 | 2.0 | 4 | 5 | 3 | 4 | 2 | 2 | 1 |
| IC342322-1 | 1 | 5 | 3.0 | 4 | 5 | 3 | 4 | 2 | 2 | 1 |
| IC342322-3 | 1 | 5 | 3.0 | 4 | 5 | 3 | 4 | 2 | 2 | 1 |
| IC342327-1 | 1 | 5 | 3.0 | 4 | 5 | 3 | 4 | 2 | 2 | 1 |
| IC342329-3 | 1 | 5 | 3.0 | 4 | 5 | 3 | 4 | 2 | 2 | 1 |
| IC383701-3 | 3 | 2 | 3.0 | 4 | 1 | 3 | 4 | 3 | 2 | 1 |
| IC405350-2 | 1 | 5 | 3.0 | 4 | 5 | 3 | 4 | 2 | 2 | 1 |
| IC409060-2 | 1 | 5 | 3.0 | 4 | 5 | 3 | 4 | 2 | 2 | 1 |
| IC409061-3 | 1 | 5 | 3.0 | 4 | 5 | 3 | 4 | 2 | 2 | 1 |
| IC550571 | 1 | 5 | 3.0 | 4 | 5 | 3 | 4 | 2 | 2 | 1 |
| IC550572-1 | 1 | 5 | 3.0 | 4 | 5 | 3 | 4 | 2 | 2 | 1 |

**\*FrSh**- fruit shape; **FrProSh**- fruit projection shape; **FrAtr**- fruit attractiveness; **FrBSh**- fruit base shape; **FrASh**- fruit apex shape; **FrSz**- fruit size; **PrYEx**- presence of yellow exudation; **SSz**- seed size; **FKrSh**- fresh kernel shape; **FKrCl**- fresh kernel colour